

REMARKS

In response to the office action mailed September 6, 2006, Applicants have amended claims 1, 5 and 7-9, and added new claim 62. Claims 2-4, 15, 17, 19-20, 30, 33, and 38-40 are original. Claims 11-14, 18, 26-29, 31, and 35-37 were previously presented. Claims 6, 10, and 21-25 were previously withdrawn. Claims were previously presented. Claims 16, 32, 34, and 41-61 are canceled, without prejudice. No new matter is introduced.

35 U.S.C. §102

Claims 1-5, 7-9, 11, 14, 16, 33 and 35-37 have been rejected under 35 U.S.C. §102(b) as being anticipated by WO 01/12889 ("Gunzel").

Applicants have amended claim 1 to more clearly define the scope of the claimed invention. Claim 1, as amended, is directed to "[a] composite fabric article comprising ... a fabric body of knit construction ... having an inner surface and an exposed outer surface ... the exposed outer surface having a non-continuous coating comprising discrete coating segments of coating material deposited in a predetermined, repeating pattern in one or more discrete areas, on [an] exposed outer surface, corresponding to predetermined regions of the fabric body prone to abrasion and pilling during use ... and the exposed outer surface having one or more other areas adjacent said discrete areas substantially free of the non-continuous coating." Gunzel does not describe or suggest each and every limitation of claim 1, as now amended.

Gunzel describes a woven or knit fabric treated with a polymer applied to a surface of the fabric. (*See, e.g.*, Gunzel at page 2, lines 33-34 and FIGS. 1-7). According to Gunzel, the polymer is applied to the fabric surface as a light weight web of polymer filaments. (*See, e.g., id.* at page 2, 34-36). The web on the fabric is caused to melt so that the filaments of the web lose their identity. (*See, e.g., id.* at page 3, lines 1-2). Gunzel does not describe discrete coating segments of coating material deposited in a *predetermined, repeating pattern*. (Emphasis Added). Rather, according to Gunzel, "[m]elting of the polymeric filaments destroys the non-woven web structure and causes formation of a discontinuous, *randomly disposed* polymeric material" adhered to the fabric surface. (*See, e.g., id.* at page 6, lines 34-37; emphasis added). In

fact, a person of ordinary skill in the art would have been discouraged from using a predetermined, repeating pattern of discrete coating segments because Gunzel disparages the application of coating in regular patterns on an outer surface of a garment. (*See, e.g., id.* at page 2, lines 7-18).

The Examiner maintains further that "Gunzel teaches reinforcing such apparel and indicate [*sic*] that it is desirable to use the coating in the areas that are subject to abrasion." (Office Action of September 6, 2006 at page 4). However, even assuming, without conceding, that the Examiner's assertions with regard to Gunzel are correct, Gunzel still fails to describe or suggest a non-continuous coating deposited in one or more discrete areas corresponding to predetermined regions of the fabric body prone to abrasion and pilling during use, and one or more other areas of the outer surface adjacent said discrete areas substantially free of the non-continuous coating. Rather, Gunzel describes the use of fine, lightweight non-woven webs to "minimize the distance between polymer areas, to provide for better local abrasion resistance as is needed around cuffs, collars pocket edges, and generally any folds or creases." (*See, e.g., id.* at page 6, lines 27-30).

These are not merely trivial distinctions. By depositing the non-continuous coating in a predetermined and repeating pattern, the claimed configuration provides for a fabric article with enhanced reproducibility and predictability in terms of air permeability, moisture vapor transmission, and abrasion and pilling resistance. In addition, since the non-continuous coating is applied only to predetermined, discrete areas of the exposed outer surface of the fabric, leaving other areas substantially free of the non-continuous coating, the claimed configuration provides for controlled air permeability and abrasion and pilling resistance that is focused in the areas that may benefit from it most, while, at the same time, allowing for different performance characteristics, such as greater air flow, stretch, and/or insulation and water resistance in the other areas.

In view of the foregoing discussion, Applicants request reconsideration and withdrawal of the rejection of claims 1-5, 7-9, 11, 14, 33 and 35-37 as anticipated by Gunzel. Claim 16 has been canceled, and as such, the rejection is now moot with respect to claim 16.

35 U.S.C. §102/103

Claims 12-13 and 39-40 have been rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Gunzel. Applicants presume that these rejections are based upon the Examiner's interpretation of Gunzel with respect to claim 1, and submit that the features missing from Gunzel with respect to claim 1 are also missing with respect to claims 12-13 and 39-40.

The Examiner acknowledged that "Gunzel does not explicitly teach the claimed bound groupings of yarns have a tenacity greater than 5 grams per denier," and suggests that "it is reasonable to presume that the claimed properties are inherent." (Office Action of September 6, 2006 at page 4). However, as discussed above in greater detail, Gunzel fails to teach or suggest "[a] composite fabric article comprising ... a fabric body of knit construction ... having an inner surface and an exposed outer surface ... the exposed outer surface having a non-continuous coating comprising discrete coating segments of coating material deposited in a predetermined, repeating pattern in one or more discrete areas, on [an] exposed outer surface, corresponding to predetermined regions of the fabric body prone to abrasion and pilling during use ... and the exposed outer surface having one or more other areas adjacent said discrete areas substantially free of the non-continuous coating."

Gunzel also does not provide teaching or suggestion of "groupings of yarns," but rather shows agglomerations of melted and congealed polymer achieved by destruction of the fiber structure, e.g. as shown in FIG. 7.

Therefore, Applicants respectfully request that the rejections of claim 12-13 and 39-40 as anticipated by, or in the alternative, as obvious over Gunzel be withdrawn.

35 U.S.C. §103

Claim 15 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Gunzel in view of U.S. Pat. 5,626,949 ("Blauer"). Claim 15 depends from claim 1 and, thus, is directed to "[a] composite fabric article comprising ... a fabric body of knit construction ... having an inner surface and an exposed outer surface ... the exposed outer surface having a non-continuous coating comprising discrete coating segments of coating material deposited in a predetermined, repeating pattern in one or more discrete areas, on [an] exposed outer surface, corresponding to

predetermined regions of the fabric body prone to abrasion and pilling during use ... and the exposed outer surface having one or more other areas adjacent said discrete areas substantially free of the non-continuous coating." A person having ordinary skill in the art would not have been motivated to combine Gunzel and Blauer.

Blauer describes woven, synthetic polymer fabric including a printed stratum (coating) applied directly to an inner face of the fabric. (*See, e.g.*, Blauer at col. 2, lines 57-58; *see also* col. 3, lines 42-45).

The Examiner acknowledged that Gunzel "fails to teach that the coating segments are in discrete dots." (Office Action of September 6, 2006 at page 5). However, the Examiner asserted that Blauer teaches this feature and that "it would have been obvious to a person of skill in the art to use a pattern of dots as suggested by Blauer for application of the coating when used with Gunzel motivated by the desire to maintain the fabric's appearance while still providing reinforcement in areas." (Office Action of September 6, 2006, page 6).

Contrary to the Examiner's assertion, a person having ordinary skill in the art would not have been motivated to modify Gunzel by combining Gunzel with Blauer. As noted above, Gunzel explicitly discourages the use of patterned coatings (such as honeycombs, grids and discrete dots) on the outside of the fabric garment. (*See, e.g.*, Gunzel at page 2, lines 7-10; *referencing* Blauer). For example, Gunzel suggests that the use of such coatings is undesirable because the textile appearance is undesirably altered, and that a further limitation of using regular patterns is that disruptions in such patterns are prone to scrutiny. (*See, e.g., id.* at lines 10-15). Additionally, according to Gunzel, the periodicity associated with regular patterns can introduce stress concentrations along preferred axes, which can tend to cause accelerated wear in those areas. (*See, e.g., id.* at lines 16-18). For at least these reasons a person of ordinary skill in the art would not have been motivated to combine Gunzel and Blauer in the manner suggested by the Examiner.

Furthermore, assuming without conceding that a person of ordinary skill in the art would have been motivated to modify Gunzel by combining Gunzel with Blauer, the result of the combination still would not have included all of the features of claim 1, let alone claim 15. Specifically, Blauer does not describe or suggest a non-continuous coating deposited in one or more discrete areas, on an exposed outer surface of a fabric body, corresponding to

predetermined regions of the fabric body prone to abrasion and pilling during use, and one or more other areas of the outer surface adjacent said discrete areas substantially free of the non-continuous coating. Rather, Blauer describes a printed stratum (coating) having breaks or discontinuities for use in place of prior art coatings that covered the entire surface of the fabric. (See, e.g., Blauer at col. 4, lines 19-31). There is nothing that suggests that printed stratum described by Blauer is anything other than a discontinuous coating (i.e., a patterned coating including breaks or discontinuities in the coating material) applied over the entire inner surface of the fabric.

Accordingly, Gunzel and Blauer, whether taken alone or in any proper combination, fail to describe or suggest each and every limitation of Applicants' claim 15. In view of the foregoing, Applicants request reconsideration and withdrawal of the rejection of claim 15 as being unpatentable over Gunzel in view of Blauer.

Claims 17-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gunzel in view of U.S. Pub. 2001/0046580 ("Rock"; Our Ref.: 10638-005002). Applicants presume that these rejections are based upon the Examiner's interpretation of Gunzel with respect to claim 1, and submit that the features missing from Gunzel with respect to claim 1 are also missing with respect to dependent claims 17-20.

Rock describes a double-face knit fabric article having a technical face formed by a micro-denier filament stitch yarn and a technical back formed by a micro-denier filament loop yarn, and having a velour surface formed at both the technical face and technical back of the fabric article. (See, e.g., Rock at paragraphs 18-20; *see also* FIG. 2).

With respect to claim 17, the Examiner acknowledged that Gunzel fails to teach "using a circular reverse plaited knit construction," and adds Rock for teaching that "using a reverse plaiting technique in circular knit fabrics can provide dynamic thermal insulation properties (See Office Action of September 6, 2006, page 6; *citing* Rock at paragraphs 7 and 8). Regarding claim 18, the Examiner acknowledged that "Gunzel fails to teach that the stitch yarn is finer than the loop yarn," and adds the Rock for teaching that "the loop yarn should be greater in size than the stitch yarn (*Id.*; *citing* Rock at paragraph 21). With regard to claims 19 and 20, the Examiner acknowledges that "Gunzel fails to teach that the loop yarn is at most about 1.5 dpf and the stitch

yarn is at least about 1.5 dpf,” and adds Rock for teaching that “the loop yarn to have [*sic*] a dpf as low as 0.5 and the stitch yarn to have a dpf as high as 3.0” (*Id.*, citing Rock at paragraphs 19 and 20). However, Rock fails to provide the subject matter missing from the Gunzel reference. Specifically, Rock does not describe or suggest “a non-continuous coating comprising discrete coating segments of coating material deposited in a predetermined, repeating pattern in one or more discrete areas, on [an] exposed outer surface, corresponding to predetermined regions of the fabric body prone to abrasion and pilling during use ... and the exposed outer surface having one or more other areas adjacent said discrete areas substantially free of the non-continuous coating.”

Therefore, Applicants respectfully request that the rejections of claims 17-20 as unpatentable over Gunzel in view of Rock be withdrawn.

Claims 26-29 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Gunzel in view of U.S. Pat. 5,456,960 (“Ido”). Applicants presume that these rejections are based upon the Examiner’s interpretation of Gunzel with respect to claim 1, and submit that the features missing from Gunzel with respect to claim 1 are also missing with respect to dependent claims 26-29.

Ido describes a union knit fabric comprised of a polyurethane elastic fiber, and a polyamide fiber and/or a polyester fiber. (*See, e.g.*, Ido at col. 4, lines 50-52). More particularly, Ido is directed toward a method of dyeing a union fabric made with a polyurethane elastic fiber, and a polyamide fiber and/or cation dyeable polyester fiber, and to a union knit fabric obtained by the method. (*See, e.g., id.* at col. 1, lines 9-12).

With regard to claim 26, the Examiner acknowledged that “Gunzel fails to teach that the yarn includes an elastomeric material on the outer surface,” and apparently adds Ido for teaching that “the polyurethane elastic fiber may be used as a cover yarn for the polyester yarn.” (Office Action of September 6, 2006 at page 7).

With regard to claims 27-29, although the Examiner has not identified the relevant disclosure in the Ido reference regarded as corresponding to each element of these rejected claims, Applicants assume that the Examiner adds the Ido reference for teaching the features of claims 27-29 based on the Examiner’s recognition that “Gunzel fails to teach that the elastomeric

material is in the form of spandex added to the yarn at the outer surface ... that the elastomeric material is wound around the yarn at the outer surface ... [and/or] that spandex is added at the outer surface in air jet cover.” (Office Action of September 6, 2006 at page 7). If these assumptions are regarded as incorrect, the Examiner is respectfully requested to point to specific language in the reference relied upon as corresponding to each element of the rejected claims.

Assuming without conceding that the Examiner's assertions with regard to the Ido reference are correct, the Ido reference still fails to provide the subject matter missing with respect to Gunzel. Ido does not teach or suggest “a non-continuous coating comprising discrete coating segments of coating material deposited in a predetermined, repeating pattern in one or more discrete areas, on [an] exposed outer surface, corresponding to predetermined regions of the fabric body prone to abrasion and pilling during use ... and the exposed outer surface having one or more other areas adjacent said discrete areas substantially free of the non-continuous coating.”

Therefore, Applicants respectfully request that the rejections of claims 26-29 as unpatentable over Gunzel in view of Ido be withdrawn.

Claims 30-31 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Gunzel in view of U.S. Pat. 5,171,633 (“Muramoto”). Applicants presume that these rejections are based upon the Examiner's interpretation of Gunzel with respect to claim 1, and submits that the features missing from Gunzel with respect to claim 1 are also missing with respect to dependent claims 30 and 31.

Muramoto describes a composite elastic filament including a sheath component composed of a fiber-forming thermoplastic polymer and core component composed of a fiber-forming elastomer. (*See, e.g.*, Muramoto at col. 2, lines 7-11). The Examiner acknowledges that “Gunzel fails to teach that the yarns at the outer surface include cored yarns comprising a core and a sheath as required by claim 30 and that the core comprises an elastic material as required by claim 31,” and apparently adds Muramoto for teaching “elastic filament yarn [having] polyester in [a] sheath component and polyurethane in [a] core component.” (Office Action of September 6, 2006 at page 8, *citing* Muramoto at Abstract). However, Muramoto fails to provide the subject matter missing with respect to Gunzel. More specifically, Muramoto fails to teach or

suggest "a non-continuous coating comprising discrete coating segments of coating material deposited in a predetermined, repeating pattern in one or more discrete areas, on [an] exposed outer surface, corresponding to predetermined regions of the fabric body prone to abrasion and pilling during use ... and the exposed outer surface having one or more other areas adjacent said discrete areas substantially free of the non-continuous coating."

Therefore, Applicants respectfully request that the rejections of claims 30 and 31 as unpatentable over Gunzel in view of Muramoto be withdrawn.

Claim 38 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Gunzel. Applicants presume that this rejection is based upon the Examiner's interpretation of Gunzel with respect to claim 1, and submit that the features missing from Gunzel with respect to claim 1 are also missing with respect to claim 38.

The Examiner acknowledged that "Gunzel fails to disclose that the coating is applied in the amount of about 1.7 ounces per square yard," and suggests that "it would have been obvious to one having ordinary skill in the art ... to optimize the amount of coating." (Office Action of September 6, 2006 at page 9). However, as discussed above in greater detail, Gunzel fails to teach or suggest "a non-continuous coating comprising discrete coating segments of coating material deposited in a predetermined, repeating pattern in one or more discrete areas, on [an] exposed outer surface, corresponding to predetermined regions of the fabric body prone to abrasion and pilling during use ... and the exposed outer surface having one or more other areas adjacent said discrete areas substantially free of the non-continuous coating." Therefore, Applicants respectfully request that the rejection of claim 38 be withdrawn.

Claim 62 (New)

Applicants have added claim 62. With regard to claim 62, Applicants describe and claim a composite fabric article including multi-filament interlaced yarns forming a fabric body of knit construction. The fabric body has an inner surface having at least one region of raised fibers or fleece formed thereupon, and an exposed outer surface having a non-continuous *latex* coating including discrete coating segments of coating material disposed in one or more discrete areas on the exposed outer surface in a pattern corresponding to predetermined regions of the fabric body

prone to abrasion and pilling during use. The coating serves to bind individual yarn fibers together in bound groupings and to enhance abrasion resistance of the outer surface.

Neither Gunzel nor Blauer either teach or suggest a fabric body of knit construction having a non-continuous latex coating. Rather, Gunzel suggests that "the polymeric material applied to the fabric can be a polyurethane, polyamide, polyester, polyolefin, silicone, acrylic or the like." (*See, e.g.*, Gunzel at page 5, lines 29-30). Blauer describes "a printed stratum of a ... highly flexible elastomer, such as an acrylic urethane, applied directly to the inner surface of the fabric." (*See, e.g.*, Blauer at col. 3, lines 42-45).

As described above, the claimed configuration includes a non-continuous *latex* coating. Latex is polymer particles in a water base, which will migrate through the yarns and/or fibers in the textile fabric and deposit there after evaporation, thereby binding fiber to fiber in a non-continuous form. Thus, the coating is deposited on the fiber surface and in fiber to fiber contact to reduce fiber fraying without generating a three-dimensional boundary layer.

Contrary to the claimed construction, both Gunzel and Blauer describes coatings that form three dimensional physical barrier layers on their respective fabric surfaces. For example, Gunzel describes and shows "a thin coating that ... forms a thin layer on the uppermost portion of yarn and does not substantially occlude a majority of the spaces between the yarns." (*See, e.g.*, Gunzel at page 3, lines 11-13; *see also* FIGS. 1-7). Similarly, Blauer describes and shows a three dimensional layer (i.e., stratum) on the surface of the woven polymer fabric (*see, e.g.*, Blauer, FIG. 2; *see also* col. 3, lines 42-45).

Furthermore, none of Rock, Ido or Muramoto describes a non-continuous coating, let alone the latex coating of the claimed configuration.

CONCLUSION

Applicants submit that this application is now in condition for allowance. Early favorable action is solicited.

No fee is believed to be due for this Amendment; however, if any fees are due, please apply such fees to Deposit Account 06 1050, referencing Attorney Docket No. 10638-067001.

Respectfully submitted,

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